App. No.: 10/568,043 D Inventor: Sanjay JAIN et al. Docket No.: 429022001900

Title: SIALIC ACID DERIVATIVES FOR PROTEIN DERIVATISATION AND CONJUGATION Replacement Sheet 1/23

App. No.: 10/568,043 Docket No.: 4290220019 Inventor: Sanjay JAIN et al. Title: SIALIC ACID DERIVATIVES FOR PROTEIN DERIVATISATION AND CONJUGATION Replacement Sheet 2/23

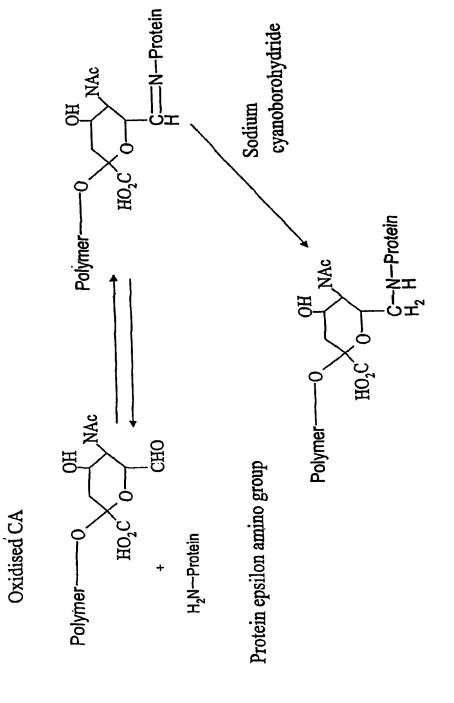
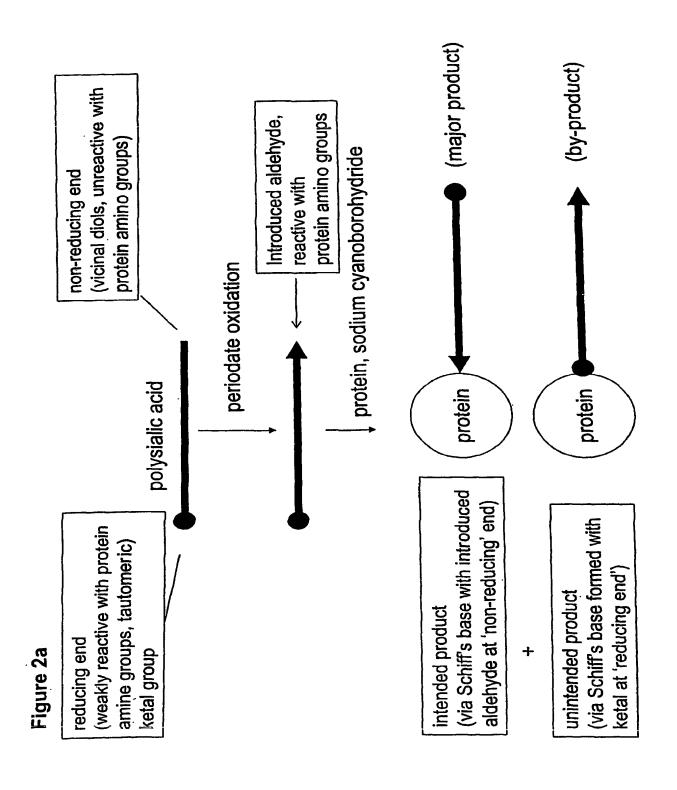


Figure 1b

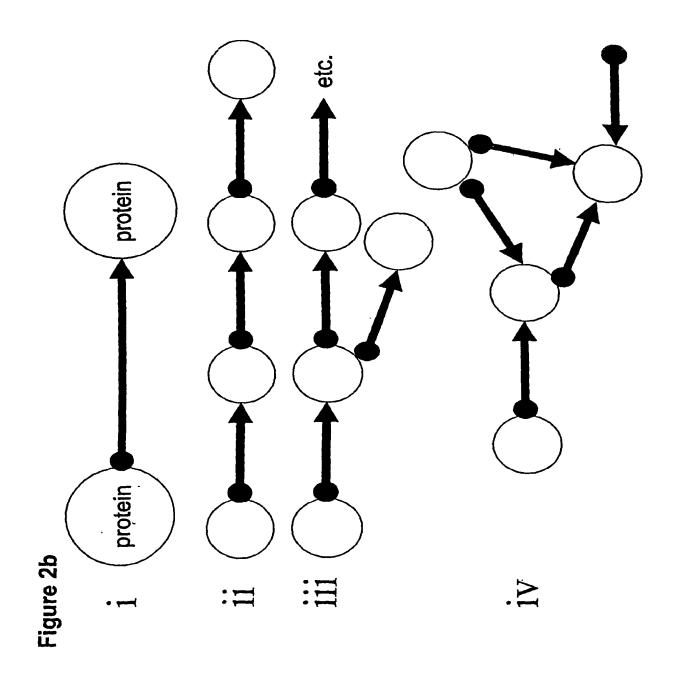
Stable secondary amine

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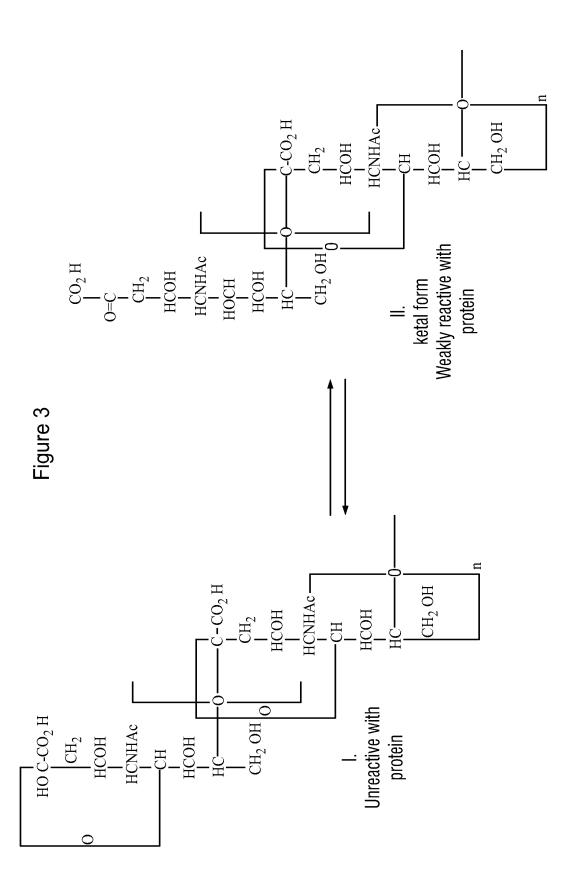
App. No.: 10/568,043 Docket No.: 429022001900 Inventor: Sanjay JAIN et al.
Title: SIALIC ACID DERIVATIVES FOR PROTEIN DERIVATISATION AND CONJUGATION Replacement Sheet 4/23



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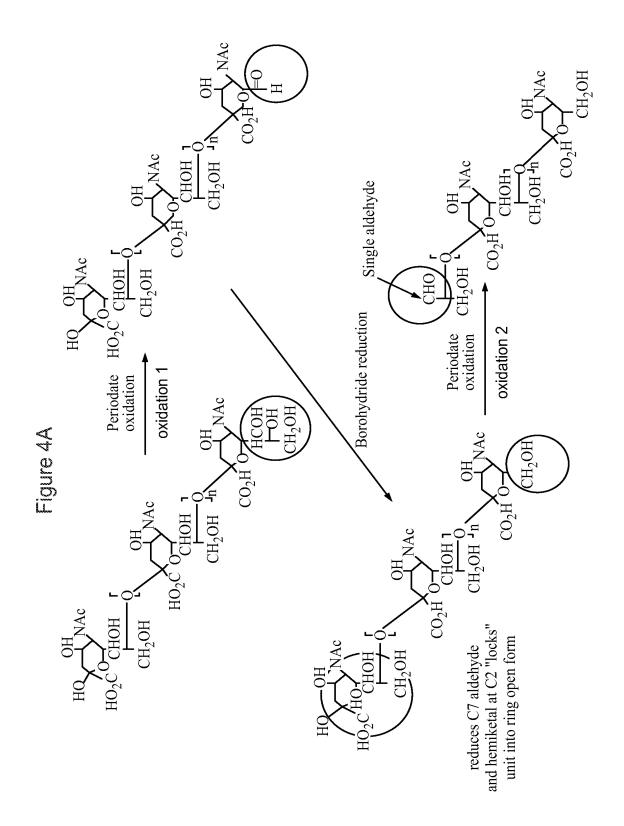
Title: SIALIC ACID DERIVATIVES FOR PROTEIN DERIVATISATION AND CONJUGATION

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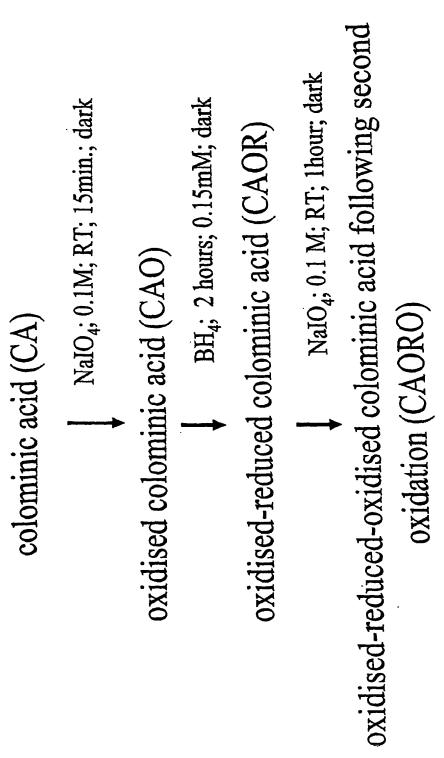
Title: SIALIC ACID DERIVATIVES FOR PROTEIN DERIVATISATION AND CONJUGATION Replacement Sheet 6/23



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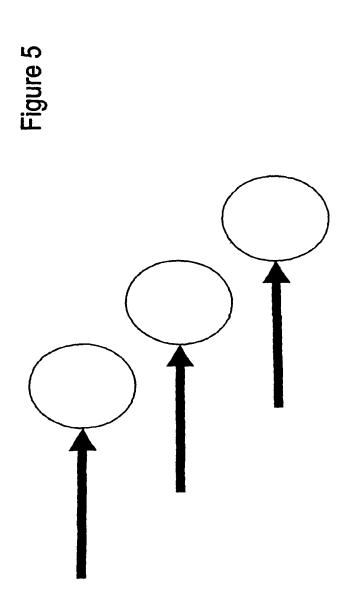
Figure 4b



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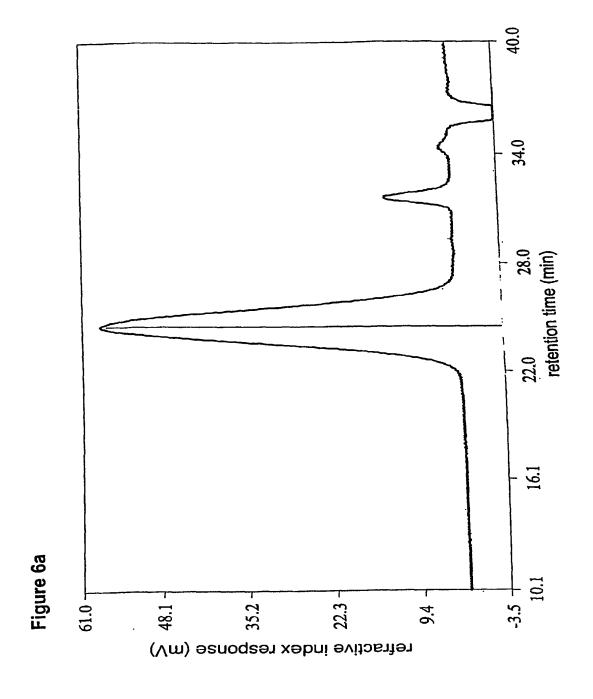


Monofunctional polysialic acid cannot form unintended by-products described for periodate-oxidised natural polysialic acid in Fig. 1

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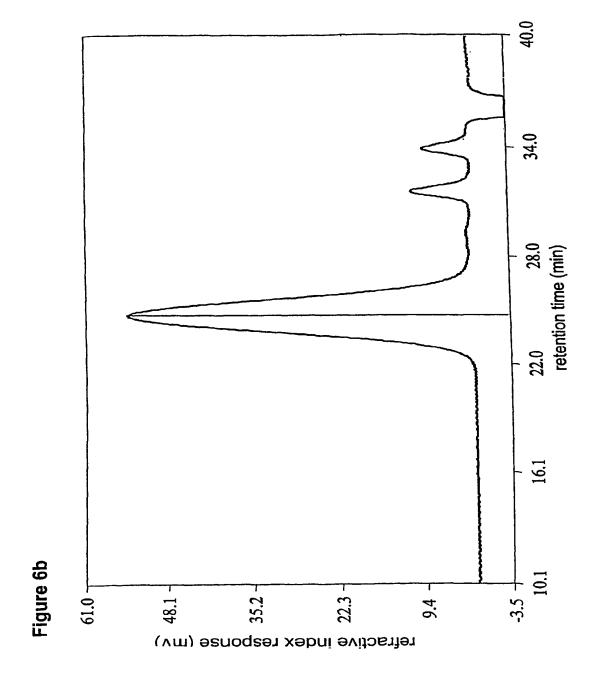
App. No.: 10/568,043 Docket No.: 4290220019 Inventor: Sanjay JAIN et al. Title: SIALIC ACID DERIVATIVES FOR PROTEIN DERIVATION AND CONJUGATION

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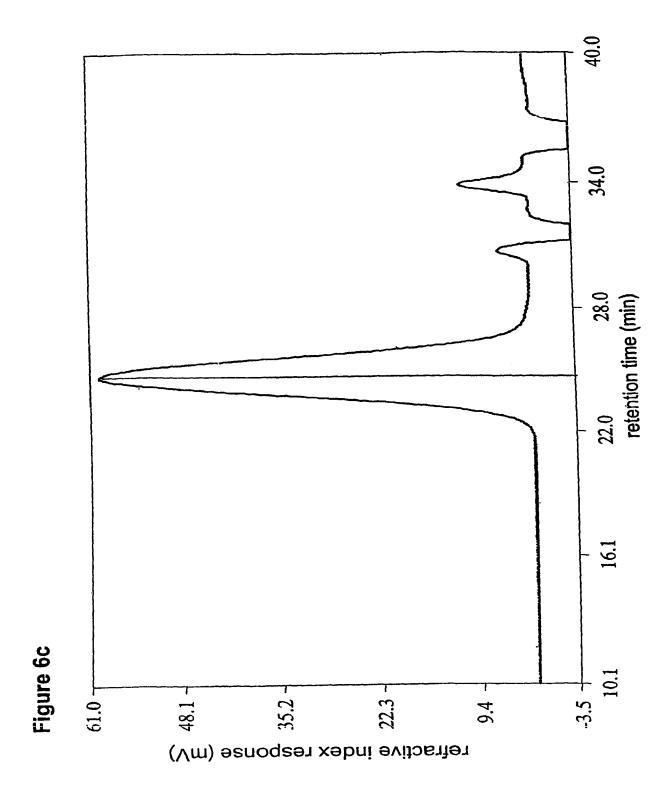
Docket No.: 429022001900

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Inventor: Sanjay JAIN et al.
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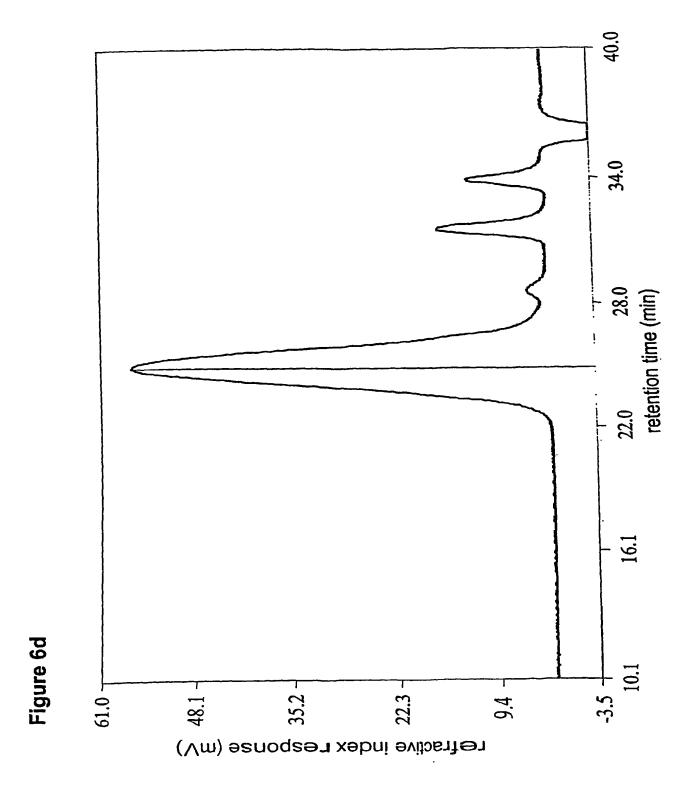
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Title: SIALIC ACID DERIVATIVES FOR PROTEIN DERIVATISATION AND CONJUGATION

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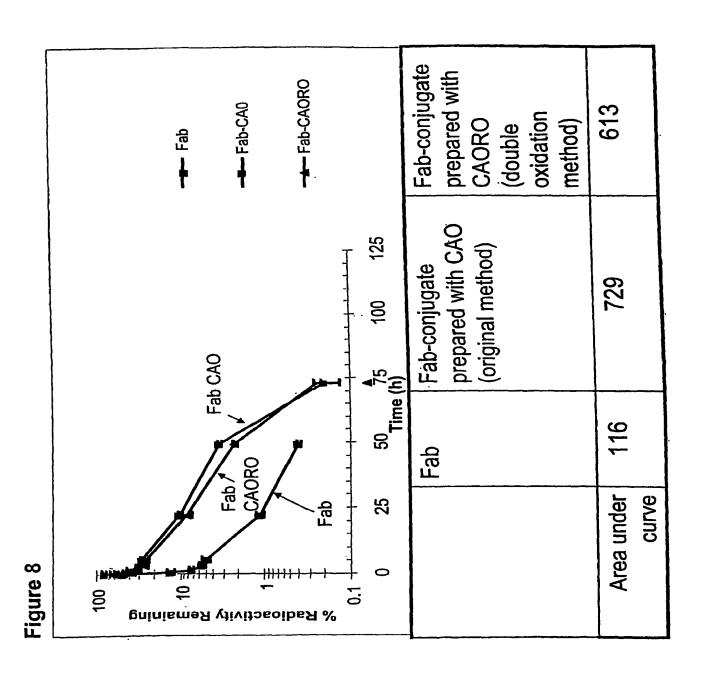
4.Fab-CAORO (new method) 1.M.w.markers 2.Fab+CA0R 3.Fab S Figure 7 250 တ္တ \$ 20

molecular mass kDa

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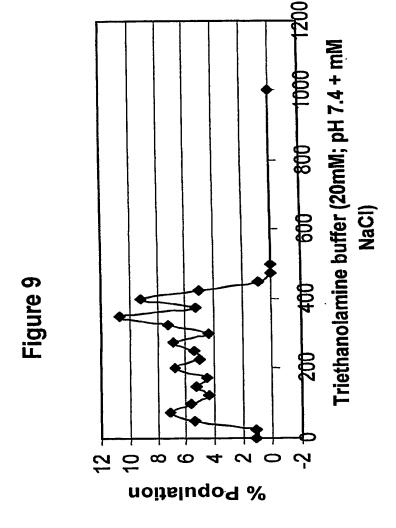
Title: SIALIC ACID DERIVATIVES FOR PROTEIN DERIVATISATION AND CONJUGATION

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Title: SIALIC ACID DERIVATIVES FOR PROTEIN DERIVATISATION AND CONJUGATION

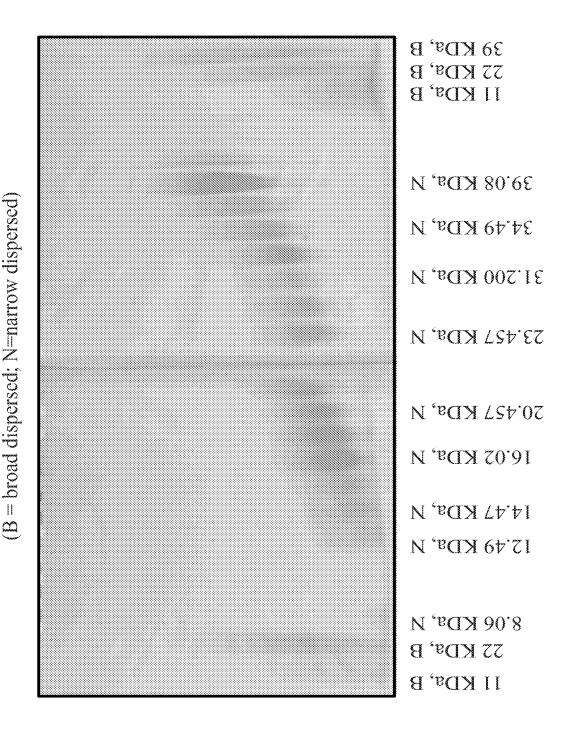
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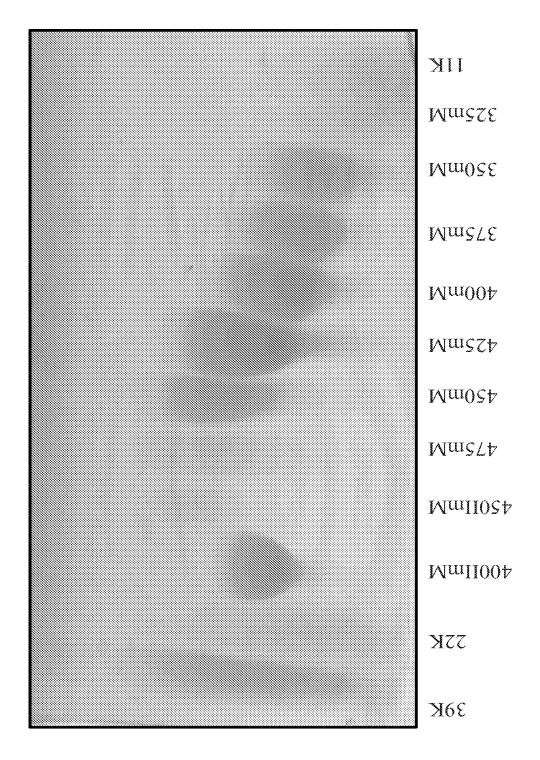
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Figure 10: A Typical Native Page of Colominic Acid Fractions with M.W.



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H Gure 1

Figure 12: A Typical GPC Chromatogram for CA Fractions

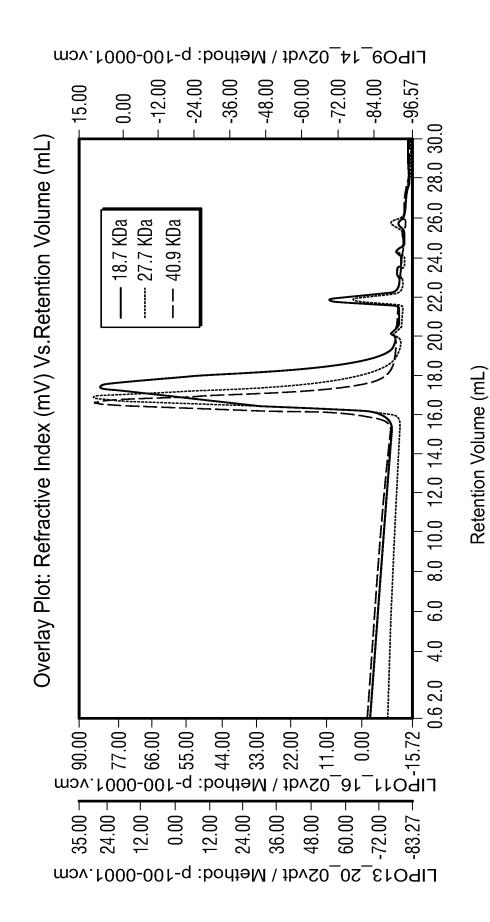


Figure 12

Title: SIALIC ACID DERIVATIVES FOR PROTEIN **DERIVATISATION AND CONJUGATION** Replacement Sheet 18/23

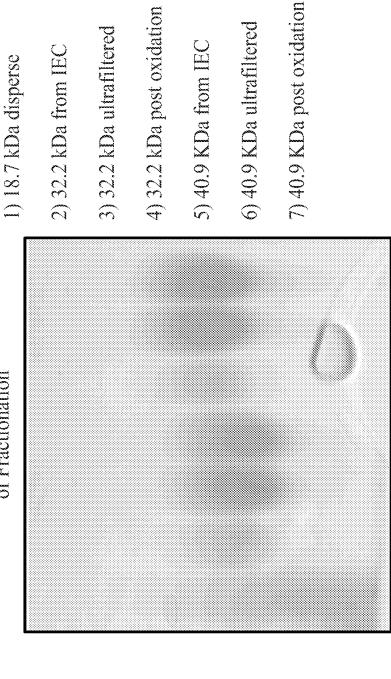
Docket No.: 429022001900 Inventor: Sanjay JAIN et al.

App. No.: 10/568,043

Title: SIALIC ACID DERIVATIVES FOR PROTEIN DERIVATISATION AND CONJUGATION

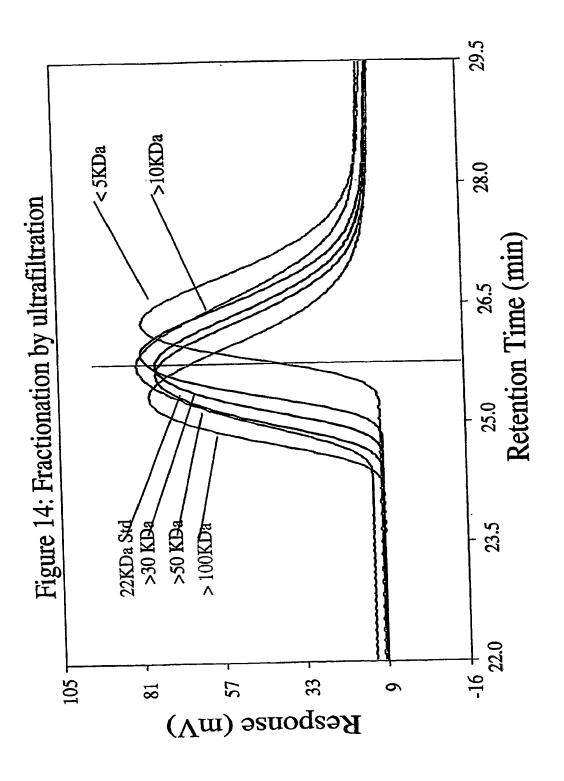
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Figure 13: Colominic Acid Samples from Different Steps of Fractionation



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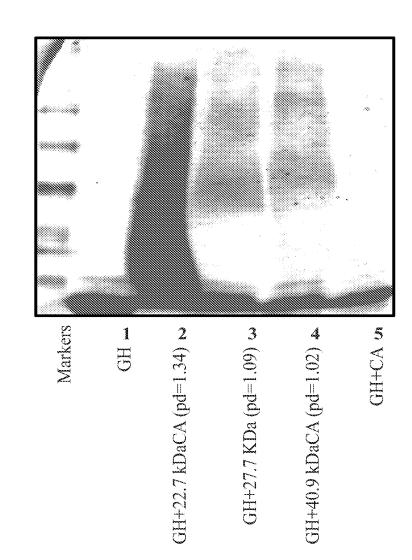
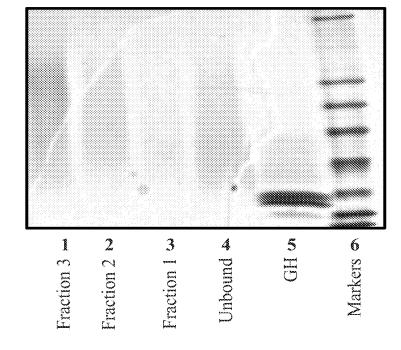


Figure 16

Figure 15



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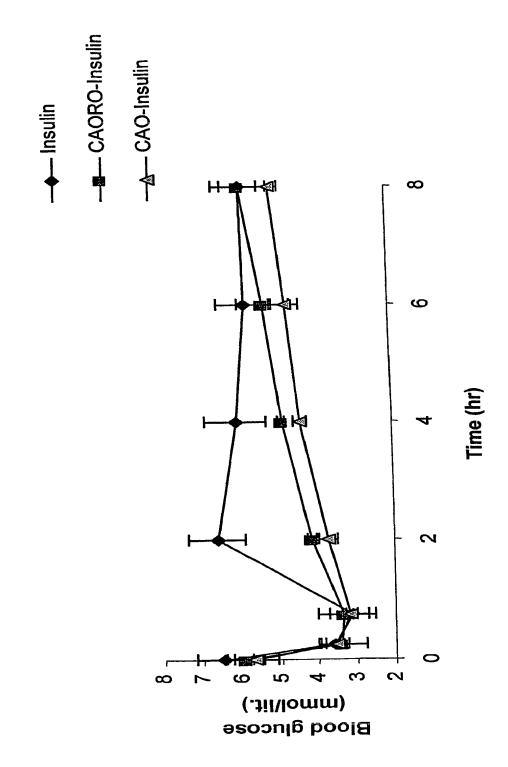


Figure 1

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Figure 18

Table 6: Ion exchange chromatography of CA22.7: Scale up (900

Sample (in 20mM	M.W. (Pd)	M.W. (Pd)
buffer+mM NaCl, pH7.4)	12.5 g batch	25 g batch
350 mM	15490 (1.008)	10.470 (1.173)
375 mM	19960 (1.010)	24659 (1.019)
400 mM	25829 (1.019)	29573 (1.018)
425 mM	33763 (1.023)	34160 (1.011)
450 mM	46880 (1.058)	44400 (1.013)
475 mM		28500 (1.376)